

ABSTRACT

This invention provides a kit comprising a substrate having a surface coated with a solid phase matrix for nucleic acid manipulation. The solid phase matrix exhibits sufficient hydrophilicity and electropositivity to tightly bind the nucleic acids in a sample. The manipulations include nucleic acid (double or single stranded DNA and RNA) capture from high volume and/or low concentration specimens, buffer changes, washes, and volume reductions, and enable the interface of solid phase bound nucleic acid with enzyme, hybridization or amplification strategies. The tightly bound nucleic acid may be used, for example, in repeated analyses to confirm results or test additional genes in both research and commercial applications. Further, a method for virus extraction, purification, and solid phase amplification from large volume plasma specimens is described.